

REMARKS

SUMMARY OF PROSECUTION HISTORY

On December 22, 2004, the Examiner issued a non-final Office Action rejecting claims 1 and 14 under 35 U.S.C. §112, and claims 1-15 under 35 U.S.C. §103(a) as unpatentable over Kelly (US Patent 6,199,152) in view of Souloglou (Publications 2003/0159134, 2004/0205733, 2004/0210880). In a Response filed on May 26, 2005, the Applicant amended claims 1, 3-5, 10, 11 and 14, and presented arguments that the Examiner found persuasive.

The Examiner issued another non-final Office Action on August 25, 2005, objecting to FIG. 4 and rejecting claims 1-15 under 35 U.S.C. §103(a) as unpatentable over Kelly (US Patent 6,199,152) in view of Le (6,631,514). In a Response filed on January 24, 2006, the Applicant argued against the rejections with respect to Kelly and Le, and submitted a replacement drawing for FIG. 4.

On April 11, 2006, the Examiner issued a final Office Action, repeating the rejections from the Office Action issued on August 25, 2005. The Examiner stated that the replacement drawing for FIG. 4 introduces new matter. In an after-final Response filed on July 11, 2006, the Applicant asked the Examiner to address the arguments presented in the Applicant's response of January 24, 2006. The Applicant also presented reasons why the objection to FIG. 4 should be withdrawn.

On August 10, 2006, the Examiner issued an Advisory Action, which addressed the rejections re: Kelly and Le, and withdrew the objection to FIG. 4.

On September 13, 2006, an Examiners Interview was conducted at the USPTO including Examiner Thai Phan, Ronald Demsher, Ian Robinson and Alasdair Rawsthorne.

On October 11, 2006, the Applicant submitted a Pre-Appeal Brief Request for Review. On November 20, 2006, a Notice of Panel Decision from Pre-Appeal Brief Review directed prosecution to be reopened.

On January 29, 2007, the Examiner issued the currently pending Office Action.

RESPONSE TO OFFICE ACTION

Claims 1-15 are pending in this application.

At paragraph 1 of the Office Action, the Examiner rejects claims 1-15 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,199,152 (Kelly) in view of U.S. Patent No. 6,279,121 (Gamo). The Examiner's rejections with respect to Kelly are substantially the same as those presented in previous Office Actions. However, in the pending Office Action, the Examiner cites Gamo as supplying that which is missing from Kelly, i.e., Kelly does not expressly disclose mapping registers in an alternative manner as claimed. The Applicant traverses this rejection because Gamo does not supply that which is missing from Kelly.

The Gamo patent (6,279,121)

Gamo discusses a method for handling exception events which are dependent upon a particular hardware processor architecture. That is, according to Gamo, an exception handler written dependent on a particular processor architecture will not function correctly if the exception handler software is instead run on a different type of hardware processor.

Gamo solves this problem by converting an "exception occurrence message" which is dependent on the processor architecture into a universal error message which is not dependent on any particular processor architecture. In the specific embodiments, the message [ExceptionNotify] is sent as a message indicating occurrence of the exception event to the object [ExceptionHandler] which then generates the exception identifier vFID as a processor architecture independent error message. The exception identifier vFID is subsequently sent to the object [FaultHandler] which then sends a message commanding pre-set processing corresponding to the exception identifier vFID to the application program responsible for the exception event. (See column 19, lines 49-65).

From this understanding of Gamo, it is clear that Gamo is not relevant to the claimed invention, and does not supply that which is missing from Kelly.

The Examiner draws attention particularly to Gamo column 2, lines 57-67 which simply discusses the above problem that hardware exceptions are unique to the hardware processor architecture employed, and that software emulation of multiple different hardware architectures is prohibitively expensive.

The Examiner further draws attention to column 13, lines 34-60, column 13, lines 34-43 and columns 14-17. These citations discuss detailed examples of exception processing on “mAV metaspace” as an example of a procedure type program and on “mCOOP metaspace” as an example of a parallel type object-oriented program, both as specific examples of the way in which exception events are reported and handled in the method of Gamo.

Gamo does not disclose that which is missing from Kelly. In particular, Gamo does not teach or suggest that a representation of a subject register (i.e., an abstract register) from a subject machine is mapped to “either a first location or a second location” within a target machine, as recited in the present claims. Further, Gamo does not teach or suggest alternating mapping such that the roles of the first and second locations are reversed or swapped, with one of those first or second locations holding the definitive “official” version and the other holding a speculative “working version”. The Examiner points to portions of Gamo (e.g., column 2, lines 57-67; column 13, line 34 to column 17) to teach “alternating mapping of the abstract register between a first location and a second location” as recited in the claims.

However, there are two problems with the Examiner’s argument. First, the text cited in Gamo does not teach or suggest alternating of any sort of mapping, as required by the claims. Second, the text cited in Gamo does not teach or suggest alternating between locations, one of which represents a definitive version and the other represents a speculative version, as required by the claims. Since the alternating mapping to the first location or a second location, recited in the independent claims 1, 9, 12, 13, 14 or 15 is not taught or suggested by Kelly or Gamo, alone or in combination, these claims should be allowable.

In summary, there is no suggestion or motivation in the Kelly or Gamo citations themselves or generally in the art to modify the cited references or combine their teachings. The hardware-independent exception reporting method of Gamo is wholly unlike the “dedicated interface” of the specially adapted morph host hardware of Kelly. Further, combining the teachings of Kelly with the teachings of Gamo has no reasonable expectation of success. Finally, as demonstrated above, combination of Kelly with Gamo does not teach or suggest all of the recited limitations of the independent claims.

The dependent claims each recite further new and non-obvious features of the invention over the teachings of the cited Kelly and Gamo references. For example, claim 4 recites that the

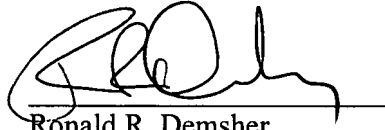
alternating mapping step is performed "only if the content of the speculative version of the abstract register has been updated during the section of subject code" and such selective swapping (alternating) of the mapping of the speculative "working" and definitive "official" roles is not taught or suggested by Kelly or Gamo. Further, the dependent claims 2-8, 10 and 11 are each allowable because they depend from an allowable independent claim.

Filed herewith is a Request for a Three-Month Extension of Time, which extends the statutory period for response to expire on July 29, 2007. Accordingly, Applicant respectfully submits that this response is being timely filed.

In view of the above amendment, applicant believes the pending application is in condition for allowance. No other fees are believed to be due in connection with the filing of this response, however the Commissioner is authorized to debit Deposit Account No. 08-0219 for any required fee necessary to maintain the pendency of this application.

Respectfully submitted,

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